COMPUTER INFORMATION SYS (DPR)

DPR 100　Introduction to Information Technology
This course is designed to provide an introduction to Information Technology (IT) concepts and applications, and the impact of IT on individuals, organizations, and society. Core content includes computer hardware and software, digital communications, the Internet, databases, networking, programming, computer security, ethics in IT, and current and emerging digital technologies.
Upon successful completion of this course, students should be able to:
Identify the types of computers and describe their purposes.
Describe how the components of a computer system function.
Use system software and utility programs for maintenance, security, and organization purposes.
Use word processing software to create, edit, format and save various documents.
Use spreadsheet, software to construct formulas, use functions, chart and analyze data; and to create, edit, format, and a save spreadsheet.
Use database software to create a query, form, and report.
Use presentation software to create, edit, format and save a presentation.
Describe the importance of computer programming.
Describe the benefits of networks and computer security implications.
Describe the legal, ethical, and privacy issues concerning IT.
Use the internet for research, evaluate, and use information.
Use digital technologies to communicate and work collaboratively.
Research and evaluate career opportunities that utilize IT skills.
Develop an e-Portfolio comprised of academic artifacts.
College Academic Learning Goal Designation: Information Technology (TC)
Prerequisites: REA 050 or ENG 099 or REA 075. Appropriate placement test scores may be accepted.
3 Credits　　3 Weekly Lecture Hours

DPR 101　Introduction to Computer Science
An engaging and approachable course that explores many of the foundational concepts of computer science and programming. Develop problem-solving, logic and critical reasoning skills as you learn basic programming structures and concepts common to all programming languages. Covers the fundamentals computer science as well as planning, coding and debugging computer programs. Learn about using computers to process information, find patterns and test hypotheses about digitally processed information to gain insight and knowledge. This is an introductory level course and previous programming experience is not necessary.
Upon successful completion of this course, students should be able to:
Identify and select appropriate programming tools for application development.
Design and implement algorithms in a programming language that involve the use of iteration and boolean logic.
Develop programs that use variables, constants and arrays.
Create programs that can perform basic arithmetic operations.
Construct modular programs using functions.
Use appropriate tools and strategies for debugging and avoiding errors.
Summarize the professional, cultural, legal and ethical issues related to computer science.
Identify career paths available in computer science and determine professional education and training standards.
Apply the process of software development including design, implementation, documentation and testing.
Learn about using computers to process information, find patterns and test hypotheses about digitally processed information to gain insight and knowledge.
Explain how binary sequences are used to represent digital data.
College Academic Learning Goal Designation: Critical Reasoning (CR), Information Technology (TC)
Prerequisites: ((ENG 050 and REA 050) or ENG 099 or REA 075) and (MAT 050 or MAT 060). Appropriate placement test scores may be accepted.
3 Credits　　3 Weekly Lecture Hours

DPR 104 Introduction to Java Programming
This course teaches the fundamentals of analyzing problems and designing, developing and testing computer programs to solve them utilizing Java in an Integrated Development Environment (IDE). The course introduces the fundamental concepts and techniques for programming including simple data structures, algorithms, variables, control structures (decision and looping), text files, method writing, and arrays as well as simple shapes and Graphical user Interface (GUI) basics.
Upon successful completion of this course, students should be able to:
Define basic computing and programming terms.
Navigate a Java IDE to write and debug Java programs.
Identify and use the basic concepts and principles of structured programming.
Explain and use data, operations, functions, and data types.
Apply the correct control and iterative structures to a program.
Implement simple GUIs and write programs that display simple shapes.
Use mathematical equations in the creation of a computer program.
Design, write, test and debug a Java program to implement a working solution to a given problem specification.
Use documentation or a knowledge base to resolve technical issues.
Implement the major steps in the analysis, design and development of a computer program.
Explore career opportunities in computer science, personal computing and business applications programming.
Prerequisites: DPR 101 or DPR 108.
3 Credits   3 Weekly Lecture Hours

DPR 105 Management Information Systems
This introductory course in managing information systems defines business processes, integrates these processes with computer technology, explains the flow of information in a business, and examines the use of information in business management. Business topics are integrated with information systems concepts. The course is designed for students using computer technology in a business environment. This course provides a real world process-oriented component to business education. Selected exercises using MS Office, MIS software, and business simulation games on the Internet are used in this course.
Upon successful completion of this course, students should be able to:
Explain what a business information system is and identify key components.
Outline the phases and steps in the information system development process.
Define business and computer technology terminology.
Give examples of how business information systems can break time, geographic, cost, and structural barriers in business.
Identify how business information systems are affecting the structure and activities of organizations.
Diagram typical flows of information in business operations.
Examine specific ethical principles of conduct and apply an ethical analysis to a difficult business information systems situation.
Identify business software tools that complete word processing, prepare spreadsheets, perform research, design databases, and prepare presentations.
Demonstrate a fundamental knowledge of how business processes and computer technology improve effectiveness of organizational goals.
Explain how information systems can improve management decision-making effectiveness.
Prerequisites: DPR 100 or DPR 101 or DPR 108.
3 Credits   3 Weekly Lecture Hours

DPR 107 Helpdesk Concepts
This course provides students with a practical introduction to Help Desk concepts. Topics covered include the different types of help desks and how they are measured by organizations; the roles and skills required to function in a Help Desk environment; and the processes and technologies commonly employed to ensure the Help Desk is operating efficiently and effectively.
Upon successful completion of this course, students should be able to:
Discuss the components of a successful Help Desk.
Discuss the emerging support center concepts.
Distinguish between the different types of Help Desks, such as centralized, decentralized, internal, external.
Use required business and technical skills.
Discuss job responsibilities of Help Desk personnel.
Discuss Help Desk processes and procedures.
Apply the technological aspects of the Help Desk.
Apply the informational aspects of the Help Desk.
Prerequisites: DPR 100.
3 Credits   3 Weekly Lecture Hours

DPR 110 Introduction to C++
The purpose of the course is to teach students the fundamentals of analyzing problems and designing, developing and testing computer programs to solve them, utilizing C++ in an Integrated Development Environment (IDE). The course introduces the basic concepts of programming C++ programming language syntax, and progresses through the techniques of using logical structures such as decision making and loops, using data structures such as arrays, and using functions for logical code organization and re-use.
Upon successful completion of this course, students should be able to:
Define basic computing and programming terms.
Navigate through the C++ editor, compiler, and runtime environment.
Explain and use data, operations, functions and data types.
Apply the correct control and iterative structures to a program.
Use mathematical equations in the creation of a computer program.
Design, write, test and debug a program to implement a working solution to a given problem specification.
Use documentation or a knowledge base to resolve technical issues.
Implement the major steps in the analysis, design, and development of a computer program.
Explore career opportunities in computer science, personal computing, and business applications programming.
College Academic Learning Goal Designation: Information Technology (TC)
Prerequisites: DPR 101 or DPR 108.
3 Credits   3 Weekly Lecture Hours

DPR 111 Computer Applications

This is a comprehensive hands-on personal computer applications course specifically designed for students to develop an intermediate knowledge of word processing software, spreadsheet software, database software and presentation software. Additional topics include an overview of the components of a microcomputer system; hardware and software; storage devices and media; interpretation of error messages, file management, files storage, and Internet research.

Upon successful completion of this course, students should be able to:
Differentiate between hardware and software.
Identify various storage devices and media.
Manage files and folders.
Navigate to information stored on the computer.
Perform tasks using features common to integrated software programs.
Demonstrate computer skills using application software on a personal computer.
Use word processing software to create, edit, and format documents.
Apply intermediate word processing skills to solve application-type problems using word processing software.
Design, create, modify, and format worksheets and workbooks using spreadsheet software.
Design databases and create, edit, and modify database objects.
Design, create, enhance, organize, and view presentations using presentation software.
Use the Internet to navigate the Web using URL and Hyperlinks, to create and delete bookmarks, to compose, view, send, receive, and print e-mail messages.
Prerequisites: REA 050 or ENG 099 or REA 075. Appropriate placement test scores may be accepted.
3 Credits   3 Weekly Lecture Hours

DPR 113 Database Management Systems

This course provides students with an introduction to data base concepts, data models and Data Base Management SYSTEM (DBMS) software. The relational data base model is examined. One or more of the common DBMS software is included as part of the hands-on activities associated with the course.

Upon successful completion of this course, students should be able to:
Discuss general concepts of computer data base systems.
Understand data models through an intuitive approach to data base design.
Recognize the standards for data base design and apply them to the data base design of a specified application.
Identify the main features of a relational data base model.
Design, develop and manipulate a rudimentary relational data base.
Prerequisites: DPR 100.
4 Credits   4 Weekly Lecture Hours

DPR 114 Microsoft Word

This course is designed to develop students' word processing skills on the microcomputer using Microsoft Word for Windows. Basic, intermediate and advanced features of MS Word are stressed.

Upon successful completion of this course, students should be able to:
Create, save, retrieve and print documents.
Identify word-shortcut commands and function keys using the WORD Keyboard Template.
Identify the various parts of the Word screen.
Edit documents by use of insert and delete functions.
Select and use character formatting features including all caps, bold, italics, underlining, double underlining, and line spacing, indenting and changing the case of letters.
Enhance business memoranda and letters by changing the alignment, indents and line spacing of paragraphs as well as creating numbered and bulleted paragraphs.
Manage documents by creating folders, copying, renaming, deleting and printing documents.
Enhance the visual display of text in documents by changing the font.
Apply formatting effects to text such as strikethrough, superscript, subscript, small caps and hidden text.
Use writing tools by completing a spelling check on text in a document, improving the grammar of text in a document using the grammar checker, adding words to and deleting words from the AutoCorrect dialog box, displaying synonyms and antonyms for specific words using Thesaurus and displaying information about a document such as the number of pages, words, characters, paragraphs and lines.
Manipulate the length of lines in business documents, create a document more quickly with the date and AutoText features, and improve the visual appeal with drop caps and nonbreaking spaces.
Manipulate tabs in documents with tab settings including left, right, center and decimal.
Control printing features for simple business documents and print envelopes and mailing labels.
Format and merge separate files to create a series of similar business documents such as personalized form letters, envelopes and labels.
Prerequisites: REA 050 or ENG 099 or REA 075. Appropriate placement test scores may be accepted.
3 Credits   3 Weekly Lecture Hours

DPR 115 Microsoft Excel

This hands-on course provides a comprehensive presentation of Microsoft Excel. The more advance features of Microsoft Excel are stressed.

Upon successful completion of this course, students should be able to:
Develop Excel worksheets that include formulas and functions.
Use Excel to develop professional-looking worksheets.
Develop charts and graphs.
Use Excel to manage financial data.
Use Excel to create static and dynamic Web pages.
Use Excel to work with multiple worksheets and workbooks.
Use Excel for data manipulation with database functions, lookup function, and templates.
Enhance Excel worksheets with Visual Basic and Macros for applications.
Use Excel worksheet for "What-If-Analysis".
Import data into Excel worksheets from other Microsoft applications.
Prerequisites: DPR 100.
3 Credits   3 Weekly Lecture Hours

DPR 116 Introduction to Online Research Strategies
This course is designed to teach students effective research skills using the internet. Students will learn effective research strategies for retrieving, evaluating and using information from internet web sites, internet-based subscription databases, and various Web 2.0 applications. The development of critical thinking skills for college level research assignments and lifelong learning will be stressed. Ethical and legal aspects regarding the use of information will be discussed.
Upon successful completion of this course, students should be able to:
Distinguish free internet sites from fee-based internet subscription services.
Use advanced features of internet search engines and fee-based internet subscription services.
Evaluate web sites for reliability and relevancy.
Choose the most effective resource and format for the specific information needed.
Understand the legal and ethical issues regarding plagiarism and copyright.
Compose a works cited list using MLA or APA format.
Navigate services available through homepages of a public library and an academic library.
Corequisites: DPR 100.
3 Credits　　3 Weekly Lecture Hours

DPR 117 Fundamentals of Game Design Theory and Practice
This course introduces students to the theory and practical aspects of the computer game development process. Students brainstorm a game idea, establish focus, determine the storytelling mode, and document the design.
Upon successful completion of this course, students should be able to:
Demonstrate an understanding of the vocabulary of game design theory and practice.
Identify the techniques of top game designers.
Analyze and identify the elements that make successful games.
Apply the computer game development process to create a design document.
Prerequisites: REA 050 or ENG 099 or REA 075. Appropriate placement test scores may be accepted.
3 Credits　　3 Weekly Lecture Hours

DPR 118 Game Creation Development
This course focuses on designing, developing and testing computer games using game creation development tools. Students use an icon-based system of events and actions to program computer games. Principles of successful game design and techniques of top game designers are also explored.
Upon successful completion of this course, students should be able to:
List requirements for a game development studioDescribe the basic elements of an image and how to manipulate it Identify and describe game genresIdentify the elements of good game designUtilize the computer game development process to create games using a game engine and design toolDemonstrate the ability to use game creation development tools to develop games for inclusion in a portfolio
Prerequisites: DPR 100 and (DPR 117 or CS 117 or DPR 238).
3 Credits　　3 Weekly Lecture Hours

DPR 119 Introduction to Computer Game Programming
This course introduces students to the concepts of programming using an object-orient programming language and game development tools. Students will create 2D and 3D games using game development tools as well as program a full-featured role-playing game (RPG) using an object-oriented programming language.
Upon successful completion of this course, students should be able to:
Describe the elements of game programming.
Create a 2D game using game development tools.
Create a 3D game using game development tools.
Use the basic programming constructs of an object-oriented programming language.
Create animations for a game.
Add sounds to a game.
Create a game using a HTML5 game-based creation engine.
Create a RPG using using an object-oriented programming language.
Prerequisites: DPR 101.
Corequisites: DPR 117 or CS 117 or DPR 238 or DPR 118 or CS 118 or DPR 232.
3 Credits　　3 Weekly Lecture Hours

DPR 121 Game Art and Animation
The focus of this course is to create 2D artwork, arrange U-V's, generate textures, and create a 3D model. Students create 3D models and animations using industry standard computer graphics software.
Upon successful completion of this course, students should be able to:
Identify the requirements of 2D artwork.
Demonstrate the ability to design and develop 2D artwork.
Identify the requirements of a 3D model.
Use a 3D modeling software product to create models and animations.
Prerequisites: ((ENG 050 and REA 050) or ENG 099 or REA 075) and (MAT 050 or MAT 060). Appropriate placement test scores may be accepted.
3 Credits　　3 Weekly Lecture Hours

DPR 141 UNIX Operating Systems
This hands-on course aims to familiarize students with the UNIX operating system. The course covers the installation, use, management and customization of UNIX in a PC environment. Topics in the course include notable and commonly used UNIX commands; the UNIX shell as both user interface and programming environment; the UNIX file system; the UNIX networking subsystem; and bandwidth management under UNIX.
Upon successful completion of this course, students should be able to:
Discuss the features and benefits of the UNIX operating system.
Log onto and out of a UNIX system.
Discuss the UNIX file naming convention.
Construct both simple and enhanced UNIX command lines.
Describe and distinguish between the concepts of kernel, shell and file system.
Discuss the file hierarchical structure.
Employ both user- and administrator-oriented UNIX commands in an effective manner.
Identify the most significant characteristics of the UNIX networking subsystem and UNIX bandwidth management.
Recognize and describe widely-used UNIX applications such as Apache.
3 Credits　　3 Weekly Lecture Hours

DPR 190 Computer Programming Internship (1 credit)
College-Sponsored Experiential Learning (CSEL) is designed to integrate on-the-job learning experiences with classroom studies. These experiences are structured either to explore career options or to prepare for a specific occupation. Students participating in the Cooperative Education and Internship Program gain college credit and are graded for their learning/work experience by the appropriate faculty. Students participating in this 60 hour internship will earn 1 college credit for this experience. Upon successful completion of this hands-on work experience, the student should be able to satisfy instructionally selected competencies from those below according to the number of credits to be awarded. NOTE To be eligible for an internship, students must: • Have completed a minimum of 18 or more credits within the last 5 years. • Have begun course work in their major (at least 9 credits). • Have an overall grade point average (GPA) of 2.5. • Obtain a written recommendation by a DCCC faculty within the discipline of the internship. • Submit a current resume to the Office of Student Employment Services.
Upon successful completion of this course, students should be able to:
Explain three program-related concepts that have been applied during the work experience.
Describe the ways that technology is utilized in the work experience.
Analyze the culture of the host organization.
Analyze an operational process within the work experience.
Demonstrate how assigned tasks depend on successful communication.
Describe how time and activity are managed to meet work-imposed deadlines.
Describe an instance where problem-solving skills were needed to analyze a situation in the work experience.
Demonstrate specifically how job-related competence has improved.
Formulate a self-assessment for career growth and personal satisfaction.
Satisfy the competencies of the chosen CSEL placement (to be developed in consultation with the CSEL instructor).
Work closely with a faculty mentor in the student's program/major to complete a project which articulates how the experience helps the student achieve program outcomes.
1 Credit

DPR 194 Computer Programming Internship
College-Sponsored Experiential Learning (CSEL) is designed to integrate on-the-job learning experiences with classroom studies. These experiences are structured either to explore career options or to prepare for a specific occupation. Students participating in the Cooperative Education and Internship Program gain college credit and are graded for their learning/work experience by the appropriate faculty. Students participating in this 120 hour internship will earn 2 college credits for this experience. Upon successful completion of this hands-on work experience, the student should be able to satisfy instructionally selected competencies from those below according to the number of credits to be awarded. NOTE To be eligible for an internship, students must: Have completed a minimum of 18 or more credits within the last 5 years. Have begun course work in their major (at least 9 credits). Have an overall grade point average (GPA) of 2.5. Obtain a written recommendation by a DCCC faculty within the discipline of the internship. Submit a current resume to the Office of Student Employment Services.
Upon successful completion of this course, students should be able to:
Explain three program-related concepts that have been applied during the work experience.
Describe the ways that technology is utilized in the work experience.
Analyze the culture of the host organization.
Analyze an operational process within the work experience.
Demonstrate how assigned tasks depend on successful communication.
Describe how time and activity are managed to meet work-imposed deadlines.
Describe an instance where problem-solving skills were needed to analyze a situation in the work experience.
Demonstrate specifically how job-related competence has improved.
Formulate a self-assessment for career growth and personal satisfaction.
Satisfy the competencies of the chosen CSEL placement (to be developed in consultation with the CSEL instructor).
Work closely with a faculty mentor in the student's program/major to complete a project which articulates how the experience helps the student achieve program outcomes.
2 Credits

DPR 199 Computer Programming Internship
College-Sponsored Experiential Learning (CSEL) is designed to integrate on-the-job learning experiences with classroom studies. These experiences are structured either to explore career options or to prepare for a specific occupation. Students participating in the Cooperative Education and Internship Program gain college credit and are graded for their learning/work experience by the appropriate faculty. Students participating in this 180 hour internship will earn 3 college credits for this experience. Upon successful completion of this hands-on work experience, the student should be able to satisfy instructionally selected competencies from those below according to the number of credits to be awarded. NOTE To be eligible for an internship, students must: Have completed a minimum of 18 or more credits within the last 5 years. Have begun course work in their major (at least 9 credits). Have an overall grade point average (GPA) of 2.5. Obtain a written recommendation by a DCCC faculty within the discipline of the internship. Submit a current resume to the Office of Student Employment Services.
Upon successful completion of this course, students should be able to:
Explain three program-related concepts that have been applied during the work experience.
Describe the ways that technology is utilized in the work experience.
Analyze the culture of the host organization.
Analyze an operational process within the work experience.
Demonstrate how assigned tasks depend on successful communication.
Describe how time and activity are managed to meet work-imposed deadlines.
Describe an instance where problem-solving skills were needed to analyze a situation in the work experience.
Demonstrate specifically how job-related competence has improved.
Formulate a self-assessment for career growth and personal satisfaction.
Satisfy the competencies of the chosen CSEL placement (to be developed in consultation with the CSEL instructor).
Work closely with a faculty mentor in the student's program/major to complete a project which articulates how the experience helps the student achieve program outcomes.
**3 Credits	3 Weekly Lecture Hours**

DPR 204 Intermediate Java Programming
This course teaches students how to create single-user applications using the Java programming language. Students learn the fundamentals of object-oriented programming (OOP) by designing, coding and testing simple applications. The course is designed for students who have an understanding of programming methods and techniques using the Java programming language. It incorporates the design, coding and use of programmer developed classes and objects. Simple container classes are used to build collections of newly defined objects.
Upon successful completion of this course, students should be able to:
Define object-oriented programming terms.
Explain the fundamentals of object-oriented structures and principle of programming.
Design, implement and document Java classes to be used in a computer program.
Demonstrate use of Java class libraries.
Demonstrate use of methods and method overloading.
Explain inheritance and polymorphism and use them for derived classes.
Explain and use derived and abstract classes.
Demonstrate use of objected-oriented programming techniques to solve problems.
Build and use container classes such as vector and list.
Apply analytical skills to produce sample test cases, pseudocode or an incremental coding plan for a given problem specification.
Write, test and debug a Java program to implement a working solution to a given problem specification.
Prerequisites: DPR 104 or DPR 205.
**3 Credits	3 Weekly Lecture Hours**

DPR 206 PHP/MySQL
Students learn to develop fully functional dynamic websites using PHP and a MySQL database. Topics include: setting up a development environment, using PHP to validate and process form data, sending email, creating regular expressions, implementing user authentication and security. Students will apply these concepts in the design of a MySQL relational database system and use PHP to create, read, update, search and delete records.
Upon successful completion of this course, students should be able to:
Identify the differences between static and dynamic Web design.
Write scripts to validate and process form submission data.
Build a relational MySQL database and write SQL queries to create, read, update, delete and search records.
Identify security issues and implement best practices and solutions.
Upload files to a web server and update and maintain web sites.
Identify career paths, academic programs and training opportunities in the field of Web Design and Development
Prerequisites: IMM 120 and (DPR 101 or DPR 108) and DPR 207.
**3 Credits	3 Weekly Lecture Hours**

DPR 207 Intro to Oracle:SQL
This course introduces students to Oracle as a data base management system. Emphasis is on using SQL to query and update data in a database, create reports, and to embed SQL commands in a programming language.
Upon successful completion of this course, students should be able to:
Discuss the conceptual and physical aspects of relational database architecture.
Write and execute SQL statements.
Use the SQL editor.
Use single row and group functions.
Create tables and views.
*Produce output using SQL *Plus.*
Control user access.
Write small PL/SQL programs.
Prerequisites: ((ENG 050 and REA 075) or ENG 099 or REA 050) and (MAT 040 or MAT 050). Appropriate placement test scores may be accepted.
4 Credits   4 Weekly Lecture Hours

DPR 210 Object Oriented C++
This course teaches students how to create single-user applications using the C++ programming language. Students learn the fundamentals of object-oriented programming (OOP) by designing, coding, and testing simple applications. The course is designed for students who have an understanding of programming using the C++ language. The student must be able to design and code functions and use logic structures to accomplish specific tasks. Using the aforementioned functions and structures, the student is guided to employ object-oriented programming methods and techniques in the development of a modern OOP application. This course does NOT cover graphical designs or graphic user interfaces (GUI)
Upon successful completion of this course, students should be able to:
Define object-oriented programming terms.
Explain the fundamentals of object-oriented structures and priniciples of programming.
Use a C++ compiler and Integrated Development Environment (IDE) to create, document and debug multi-file projects.
Design, code and implement C++ classes.
Design and use class methods.
Instantiate and use class objects.
Explain inheritance and polymorphism and use them for derived classes.
Generate and handle exception objects to support error processing.
Build and use function and class templates to provide generic processes for OOP applications.
Declare and use pointer variables to generate dynamic data structures.
Design, write, test and debug C++ program to implement a working solution to a given problem specification.
Prerequisites: DPR 110.
3 Credits   3 Weekly Lecture Hours
    3 Weekly Lab Hours

DPR 212 Data Structures and Algorithms
This course focuses on problem analysis, algorithm design and refinement, and computer programming. Complex data structures such as stacks, heaps, and trees as well as sorting and searching techniques are examined. Software engineering methods and structured style as well as object-oriented programming are emphasized.
Upon successful completion of this course, students should be able to:
Develop programs using good programming style and object-oriented programming techniques to implement algorithms and data structures.
Use simple and advanced data types including linked lists, stacks, queues, trees, heaps and sets.
Analyze the efficiency of various algorithms for looping, recursion, sorting, and searching.
Use abstract data types, containers and class templates, encapsulation, inheritance, and polymorphism.
Evaluate simple systems concepts such as input/output buffers, parameter passing mechanisms, and memory management.
Use documentation or a knowledge base to resolve technical issues.
Apply the software development process to design, write, test, and debug computer programs using an object-oriented language.
Prerequisites: (MAT 135 or MAT 152) and (DPR 204 or DPR 210).
4 Credits   3 Weekly Lecture Hours
    2 Weekly Lab Hours

DPR 214 jQuery/JavaScript
jQuery is a fast, small, and feature-rich JavaScript library. In this course students learn to use jQuery, JavaScript and Ajax to include dynamic content and create feature-rich web sites. Also covers jQuery Mobile to build cross-platform mobile web pages. NOTE: Pre-reqs with grade of 'C' or better.
Upon successful completion of this course, students should be able to:
Develop dynamic Web 2.
0 applications with jQuery, HTML, CSS and Ajax.
Enhance HTML forms using jQuery validation and call web services.
Build cross-platform, cross-device mobile pages using jQuery Mobile.
Animate web pages using jQuery effects.
Convert serialized server data to HTML using JSON.
Design sophisticated user interfaces with jQuery UI.
Use objects, methods, and properties to manage and manipulate the elements of a web page using the Document Object Model.
Prerequisites: (DPR 101 or DPR 108) and IMM 120.
3 Credits   3 Weekly Lecture Hours

DPR 222 Visual Basic Programming
This course familiarizes students with ways to create single-use applications using Microsoft's Visual Basic (VB.NET) programming language. Students learn the fundamentals of Object Oriented Programming (OOPS) by designing, coding and testing simple Windows-based applications. The course is designed for students with an understanding of programming design and logic but who need to understand event-driven programming methods and techniques.
Upon successful completion of this course, students should be able to:
Describe the differences between event-driven programs and procedure-driven programs.
Define objects, properties, methods, and events.
Create applications that correctly declare and use variables, accept user input, use subs and functions, and use code loops and control structures.
Locate and correct coding problems using de-bugging tools.
Prerequisites: DPR 101 or DPR 108.
4 Credits   3 Weekly Lecture Hours
    2 Weekly Lab Hours

DPR 227 Introduction to PC Support
This is the first part of the hands-on hardware preparation for students whose goal is to develop an understanding of operating systems to maintain and manage a personal computer. The course prepares students to understand the terminology and technically support ports, motherboards, microprocessors, memory, interrupt requests, basic power needs, chips, cables, troubleshooting and Internet resource discovery both to find information and help in troubleshooting devices.
Upon successful completion of this course, students should be able to:
Identify the components of a typical microcomputer system.
Demonstrate a knowledge of components such as ports, motherboards, microprocessors, memory, interrupt requests, basic power needs, chips, and cables.
Troubleshoot the above devices using various techniques including Internet resources.
Discuss error messages and their meanings.
Install and support operating systems.
Analyze conflicts and problems in both the hardware and software environment.
Prerequisites: (REA 050 or ENG 099 or REA 075) and (MAT 050 or MAT 060). Appropriate placement test scores may be accepted.
3 Credits   3 Weekly Lecture Hours

DPR 228 PC Repair and Maintenance
This course is a continuation of the hands-on course for students whose goal is to work with personal computer operating systems. The course prepares students to technically support personal computer repair and maintenance.
Upon successful completion of this course, students should be able to:
Apply knowledge of SCSI, IDE, and similar hard drive configurations.
Utilize knowledge of partitioning, formatting, fragmentation and defragmentation, disk caching, and troubleshooting of hard drives.
Apply knowledge of FDISK, SCANDISK, CHKDSK and other similar disk drive utilities.
Construct configuration files for optimal computer performance.
Utilize CD-ROM drives, video cards, sound cards as well as audio CD use.
Apply knowledge of Caching, Serial and Parallel devices, Mice, and keyboards.
Apply knowledge of monitors, screen savers, video adapters, and video memory.
Troubleshoot FireWire, serial and parallel ports and various bus configurations.
Utilize knowledge of printers including types and troubleshooting techniques.
Apply knowledge of various configurations and troubleshooting methods including DOS, Windows 3 1/95/98/NT/2000.
Use various boot processes and methods as well as optimization techniques.
Discuss compression, encryption, and dial-up networking techniques as well as network security topics.
Prerequisites: (REA 050 or ENG 099 or REA 075) and (MAT 050 or MAT 060). Appropriate placement test scores may be accepted.
3 Credits   3 Weekly Lecture Hours

DPR 241 Mobile Web Development
Mobile devices have revolutionized the way we entertain ourselves, get our news, and keep in touch with the world around us. Web developers must now create websites and applications that work consistently on all major mobile platforms. Learn how to use your existing web skills to move into mobile web development. Covers the key differences in mobile app design and the architectures that support these technologies. Use current HTML, CSS and JavaScript standards to design mobile user interfaces. Learn to create dedicated mobile websites and how to convert a mobile web application into a native app that can be loaded into an iPhone or Android device. NOTE: Pre-reqs with grade of 'C' or better.
Upon successful completion of this course, students should be able to:
Identify current technologies and architectures that provide the network and communications infrastructure for mobile enabled computer systems.
Define and identify the importance, types and uses of various mobile devices.
List the various operating systems used in mobile devices and discuss their advantages and disadvantages.
Apply appropriate user interface design techniques and standards to create intuitive, usable and efficient designs.
Identify the appropriate development tools, IDEs and emulators for creating and publishing various mobile applications and web sites.
Design and create web sites for display on a variety of different mobile devices and screens.
Identify careers related to mobile computing and examine requisite skills.
Convert existing XHTML web sites to HTML5.
Use media queries to optimize pages for display on different sized devices.
Create cache manifests to make sites available offline.
Use jQuery Mobile for designing and developing mobile web sites that function like native applications.
Package a web application built with HTML, CSS and JavaScript for deployment as a native app on Android or Apple iOS using PhoneGap.
Prerequisites: IMM 120 and (DPR 101 or DPR 108).
3 Credits   3 Weekly Lecture Hours

DPR 250 Digital Portfolio Development
The focus of the Digital Portfolio Development course is to design a portfolio that makes evident a student's knowledge and skills of their field of study. The portfolio is a collection of material that can be used as an interactive resume, an archive of work over time or a demonstration of proficiency. The contents of a student's portfolio can include work samples, letters of recommendation, references, transcripts, GPA, accomplishments/awards, competency lists, certifications, curricular standards, instructor assessments/evaluation, reflections, and work experiences/employer evaluations. Thus, a student's portfolio provides the ability to show work on demand and evidence of their preparation for a career or further education in their field of study. The objective of this course is for students to demonstrate the theoretical as well as the technical skills they have acquired throughout their program. Students will assess personal strengths to establish a career goal and decide how to organize their design and production work in a graduation portfolio. NOTE: Prerequisites: Depending on CS specialization, all required program courses.
Upon successful completion of this course, students should be able to:
Identify the need for a digital portfolio.
Identify the target audience of a digital portfolio.
Demonstrate the ability to organize, collect and prepare material for a digital portfolio.
Explain copyright laws as it applies to acquiring and protecting intellectual property.
Demonstrate the ability to design and develop work samples using industry standard tools and/or programming languages.
Demonstrate the use of design and development tools to develop a digital portfolio.
3 Credits   3 Weekly Lecture Hours